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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,359	04/20/2004	Richard Carl Phelps	0120-029	2610

42015 7590 02/08/2006

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EXAMINER

CLEARY, THOMAS J

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,359

Applicant(s)

PHELPS ET AL.

Examiner

Thomas J. Cleary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 4,785,394 to Fischer ("Fischer").

3. In reference to Claim 1, Fischer discloses an apparatus for use in a computer system comprising: a bus architecture (See Figure 1 Number 50); a plurality of modules connected to the bus architecture (See Figure 1 Numbers 60 and 62); a first arbiter means for controlling initiating transactions on the bus architecture (See Figure 2 Number 160 and Column 21 Line 52 – Column 22 Line 13); and a second arbiter means for controlling return transactions on the bus architecture (See Figure 2 Number 162 and Column 21 Line 52 – Column 22 Line 13); the first and second arbiter means operating independently of each other (See Column 21 Lines 61-63).

4. In reference to Claim 3, Fischer discloses the limitations as applied to Claim 1 above. Fischer further discloses a computer system comprising the apparatus (See Column 1 Lines 6-13).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to Claim 1 above, and further in view of US Patent Number 5,060,145 to Scheuneman et al. ("Scheuneman").

7. In reference to Claim 2, Fischer teaches the limitations as applied to Claim 1 above. Fischer does not teach that the bus architecture has separate read, write, and transaction buses, and wherein the first arbiter means controls use of the write and transaction control buses and the second arbiter means controls use of the read bus. Scheuneman teaches that it is well known to use of separate read (See Figure 1 Number 16), write (See Figure 1 Number 17), and transaction (See Figure 1 Numbers 25 and 26) buses. The initiating transactions of Fischer are equivalent to write

transactions, and the return transactions of Fischer are equivalent to read transactions (See Column 7 Lines 13-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to separate the single bus of Fischer into separate read, write, and transaction buses as taught by Scheuneman, resulting in the invention of Claim 2, in order to allow read and write requests to be operated in parallel, and thus improve the efficiency and bandwidth of the system by reducing bus contention (See Column 1 Lines 58-61 of Scheuneman).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to Claim 1 above, and further in view of US Patent Number 5,838,603 to Mori et al. ("Mori").

9. In reference to Claim 4, Fischer teaches the limitations as applied to Claim 1 above. Fischer does not teach an integrated circuit comprising the apparatus. Mori teaches that it is well known to construct computer systems on a single integrated circuit (See Column 8 Lines 29-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the computer system of Fischer as a system-on-chip as taught by Mori, resulting in the invention of Claim 4, in order to improve various characteristics of the system such as the operational speed, and reduce the production cost of the system (See Column 8 Lines 31-34 of Mori).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to Claim 1 above, and further in view of US Patent Number 5,046,023 to Katsura et al. ("Katsura").

11. In reference to Claim 5, Fischer teaches the limitations as applied to Claim 1 above. Fischer does not teach a graphics processing system comprising the apparatus. Katsura teaches a graphics processing system having a plurality of modules arbitrating for access to a bus (See Column 10 Lines 31-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the graphics processing system of Katsura with the bus system and arbitration of Fischer, resulting in the invention of Claim 5, in order to improve the speed and data throughput of the bus (See Abstract and Column 21 Line 53 – Column 22 Line 2 of Fischer).

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to Claim 1 above, and further in view of US Patent Number 5,016,876 to Loffredo ("Loffredo").

13. In reference to Claim 6, Fischer teaches the limitations as applied to Claim 1 above. Fischer does not teach a games console comprising the apparatus. Loffredo

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teaches a games console having a plurality of modules arbitrating for access to a bus
(See Column 22 Line 62 – Column 23 Line 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the games console of Loffredo with the bus system of Fischer, resulting in the invention of Claim 6, in order to improve the speed and data throughput of the bus (See Abstract and Column 21 Line 53 – Column 22 Line 2 of Fischer).

Response to Arguments

14. Applicant's arguments with respect to Claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thomas J. Cleary whose telephone number is 571-272-3624. The Examiner can normally be reached on Monday-Thursday (7-3), Alt. Fridays (7-2).

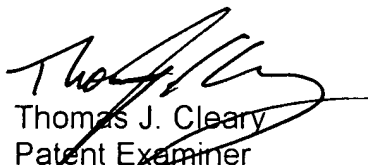
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TJC



Thomas J. Cleary
Patent Examiner
Art Unit 2111

Khanh Dang
Primary Examiner